

CLAIM AMENDMENTS

Claim Amendment Summary

Claims pending

- Before this Amendment: Claims 1-40.
- After this Amendment: Claims 1-40

Non-Elected, Canceled, or Withdrawn claims: None

Amended claims: 1-29, 33-38

New claims: None

Claims:

1. (Currently Amended) One or more computer readable storage media having stored thereon a plurality of instructions that implement a schema, the schema comprising: a schema comprising:

at least one definition that describes of entities to be implemented in a distributed-computing-distributed-computing system; and

at least one relationship that identifies links between the entities to be implemented in the distributed-computing-distributed-computing system, wherein such that the schema is used by a development tool and a deployment tool to implement the definition and the relationship.

2. (Currently Amended) The schema—one or more computer readable storage media of claim 1 wherein the schema is further used by a management tool.

3. (Currently Amended) The schema—one or more computer readable storage media of claim 1 wherein the schema allows a user of the development tool to identify desired operational intentions.

4. (Currently Amended) The schema—one or more computer readable storage media of claim 1 wherein the at least one definition includes a resource definition, a system definition and an endpoint definition.

5. (Currently Amended) The schema—one or more computer readable storage media of claim 1 wherein the at least one definition includes a resource definition that specifies ~~describes~~—a an application runtime behavior associated with a system.

6. (Currently Amended) The schema—one or more computer readable storage media of claim 1 wherein the at least one definition includes a system definition that describes a portion of an application deployed in the distributed-computing ~~distributed-computing~~ system.

7. (Currently Amended) The ~~schema—~~one or more computer readable storage media of claim 1 wherein the at least one definition includes an endpoint definition that describes communication information associated with a system.

8. (Currently Amended) The ~~schema—~~one or more computer readable storage media of claim 1 wherein the at least one relationship includes a containment relationship, a delegation relationship, a connections relationship, a hosting relationship and a reference relationship.

9. (Currently Amended) The ~~schema—~~one or more computer readable storage media of claim 1 wherein the at least one relationship includes a containment relationship that describes the ability of a particular definition to contain members of other definitions.

10. (Currently Amended) The ~~schema—~~one or more computer readable storage media of claim 1 wherein the at least one relationship includes a delegation relationship that exposes members contained in a particular definition.

11. (Currently Amended) The schema—one or more computer readable storage media of claim 1 wherein the at least one relationship includes a connections relationship that identifies available communication interactions between a plurality of definitions.

12. (Currently Amended) The schema—one or more computer readable storage media of claim 1 wherein the at least one relationship includes a hosting relationship that describes dependencies between a plurality of definitions.

13. (Currently Amended) The schema—one or more computer readable storage media of claim 1 wherein the at least one relationship includes a reference relationship that identifies ordering relationships between a plurality of definitions.

14. (Currently Amended) The schema—one or more computer readable storage media of claim 1 further comprising an abstract portion associated with templates for distributed-applications ~~distributed-applications~~ and a concrete portion associated with particular implementations of distributed-applications ~~distributed-applications~~.

15. (Currently Amended) The ~~schema—one or more computer~~
readable storage media of claim 1 further comprising a plurality of relationships,
wherein the schema provides for the communication of settings across the
plurality of relationships.

16. (Currently Amended) The ~~schema—one or more computer~~
readable storage media of claim 1 further comprising a plurality of relationships,
wherein the schema provides for the communication of application runtime
behavioral information across the plurality of relationships.

17. (Currently Amended) One or more computer readable storage
media having stored thereon a plurality of instructions that implement a schema,
the schema comprising:

at least one system definition ~~that describes~~ of a portion of an application
associated with a ~~distributed-computing~~distributed-computing system;

at least one resource definition that ~~specifies~~ describes a application
runtime behavior associated with the system; and

at least one endpoint definition ~~that—describes~~ of communication
information associated with the system.

18. (Currently Amended) One or more computer readable storage media as recited in claim 17 wherein the schema further includes at least one relationship that identifies links between entities in the distributed-computing ~~distributed-computing~~ system.

19. (Currently Amended) One or more computer readable storage media as recited in claim 17 wherein the schema further includes a containment relationship that describes the ability of a particular definition to contain members of other definitions.

20. (Currently Amended) One or more computer readable storage media as recited in claim 17 wherein the schema further includes a communication relationship that identifies available communication interactions between a plurality of definitions.

21. (Currently Amended) One or more computer readable storage media as recited in claim 17 wherein the schema is used by any of: a development tool, a deployment tool, or a management tool.

22. (Currently Amended) One or more computer readable storage media as recited in claim 17 wherein the schema models a target system on which the application will be installed.

23. (Currently Amended) One or more computer readable storage media having stored thereon a plurality of instructions that when executed by a computer implement a design tool, the design tool comprising:

a system definition model to enable defining abstractly~~abstract~~ the specifications ~~description of distributed-computing~~ ~~distributed-computing~~ systems and distributed-applications ~~distributed-applications~~; and

a schema to dictate how functional operations within the system definition model are to be specified.

24. (Currently Amended) The design tool of claim 23 wherein the design tool is a distributed-application ~~distributed-application~~ development tool.

25. (Currently Amended) The design tool of claim 23 wherein the design tool is a distributed-application ~~distributed-application~~ deployment tool.

26. (Currently Amended) The design tool of claim 23 wherein the design tool is a distributed-application ~~distributed-application~~ management tool.

27. (Currently Amended) The design tool of claim 23 wherein the distributed-applications ~~distributed-applications~~ are scale-invariant.

28. (Currently Amended) A data structure stored on one or more computer-readable media that is instantiated in accordance with a schema, the schema comprising:

at least one system definition of ~~that-describes~~ a component of a distributed-application ~~distributed-application~~;

at least one resource definition of ~~that-describes~~ a describes a application ~~runtime~~ behavior associated with the component;

at least one endpoint definition of ~~that-describes~~ communication information associated with the component;

at least one containment relationship specifying ~~that-describes-the~~ an ability of a particular definition to contain members of other definitions;

at least one delegation relationship that exposes members contained in the particular definition;

at least one communication relationship that specifies ~~identifies~~ available communication interactions between a plurality of definitions;

at least one hosting relationship that specifies ~~describes~~ dependencies between the plurality of definitions; and

at least one reference relationship that specifies identifies ordering relationships between the plurality of definitions.

29. (Currently Amended) The data structure of claim 28 wherein the distributed-application ~~distributed-application~~ is scale-invariant.

30. (Original) The data structure of claim 28 wherein the schema is accessible by an application development tool and an application deployment tool.

31. (Original) The data structure of claim 28 wherein the schema is accessible by an application deployment tool and an application management tool.

32. (Original) The data structure of claim 28 wherein the schema is accessible by:

- an application development tool;
- an application deployment tool; and
- an application management tool.

33. (Currently Amended) A method comprising:

creating a data structure in accordance with a schema, the schema defining at least one definition ~~that describes~~ of entities in a ~~distributed-computing~~ distributed-computing system, at least one containment relationship ~~specifying~~ that describes the ability of a particular definition to contain members of other definitions, at least one delegation relationship that exposes members contained in the particular definition, at least one communication relationship that specifies ~~identifies~~ available communication interactions between a plurality of definitions, at least one hosting relationship that specifies ~~describes~~ dependencies between the plurality of definitions, at least one reference relationship that specifies ~~identifies~~ ordering relationships between the plurality of definitions; and

populating the data structure.

34. (Currently Amended) One or more computer readable storage media having stored thereon a plurality of instructions that, when executed by a processor, cause the ~~instructions-processor to perform a method, the method~~ comprising:

~~load-loading~~ a definition that ~~describes of~~ entities in a distributed-computing ~~distributed-computing~~ system; and

~~load-loading~~ a relationship that specifies ~~identifies~~ communication links between the entities in the ~~distributed-computing~~ distributed-computing system, wherein such that the definition and the relationship data ~~is-are~~ used to develop during development and deployment of deploy the distributed-computing ~~distributed-computing~~ system.

35. (Currently Amended) The computer readable storage media of claim 34 wherein the definition and the relationship data ~~is-are~~ further used during management of the distributed-computing ~~distributed-computing~~ system.

36. (Currently Amended) The computer readable storage media of claim 34 wherein the definition includes a resource definition, a system definition and an endpoint definition.

37. (Currently Amended) The computer readable storage media of claim 34 wherein the relationship includes a containment relationship, a delegation relationship, a communication relationship, a hosting relationship and a reference relationship.

38. (Currently Amended) A method comprising:
loading a definition of ~~that describes~~ entities in a distributed-computing ~~distributed-computing~~ system; and

loading a relationship that specifies ~~identifies~~ communication links between the entities in the distributed-computing ~~distributed-computing~~ system, wherein such that the definition and the relationship ~~data is~~ are used during development, deployment and management of the distributed-computing ~~distributed-computing~~ system.

39. (Original) The method of claim 38 wherein the definition includes a resource definition, a system definition and an endpoint definition.

40. (Original) The method of claim 38 wherein the relationship includes a containment relationship, a delegation relationship, a communication relationship, a hosting relationship and a reference relationship.